DVBIC/DCoE 15-Year Study of Military Outcomes

Longitudinal Study of Traumatic Brain Injury Incurred by Members of the Armed Forces in Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF)

Congressional Language

- “The Secretary of Defense shall conduct a longitudinal study on the effects of traumatic brain injury incurred by members of the Armed Forces serving in Operation Iraqi Freedom or Operation Enduring Freedom on the members who incur such an injury and their families.”

- H.R. 5122; SEC. 721; 109th Congress, (a).

Specific Congressional Requirements

- Conducted for 15 years
- Elements to be addressed:
  - Long term physical and mental health effects
  - Health care, mental health care, and rehabilitation needs
  - Type and availability of long-term care and rehabilitation
  - Effect on family members
- Consultation with DVA on Periodic and Final Reports
- H.R. 5122; SEC. 721; 109th Congress, (b) through (e).

Need for Longitudinal Assessment

- Long term outcomes after TBI are not well documented in military or civilian populations. According to CDC, WHO, and other advisory panels and commissions, longitudinal studies of TBI are needed.
- Accurate data on outcomes are essential in order for DoD and DVA to estimate costs, and to determine requirements for treatment, and future needs for services and rehabilitation.

Time Line for Study

2008: Study Design, scientific review,
2008: Study submitted to participating IRBs
2009-2010: Cohort 1 recruited.
2011-2012: Cohort 2 recruited.
2013-2014: Cohort 3 recruited.
2009-2023: Yearly follow-up interviews.

Clinical follow-ups: at 2, 5, and 10 years after recruitment.
Congressional Reports: at 3, 7, 11, and 15 years.
Yearly review of study methods to take into account new findings and innovations

Collaborators

- **Centers for Disease Control and Prevention**: Collaborate on study design, follow-up instrument, collect parallel information on a matched civilian population
- **Uniformed Services University:**

  Collaborate on study design, and reports, conduct pain sub-study.
- **Neurotrauma Foundation:**

  Consult on instruments, and study design, particularly for moderate to severely injured patients.
- **Department of Veterans Affairs:**

  Provide tracking of patients treated in DVA facilities, qualitative assessment of injury.

Reports and Publication Plan

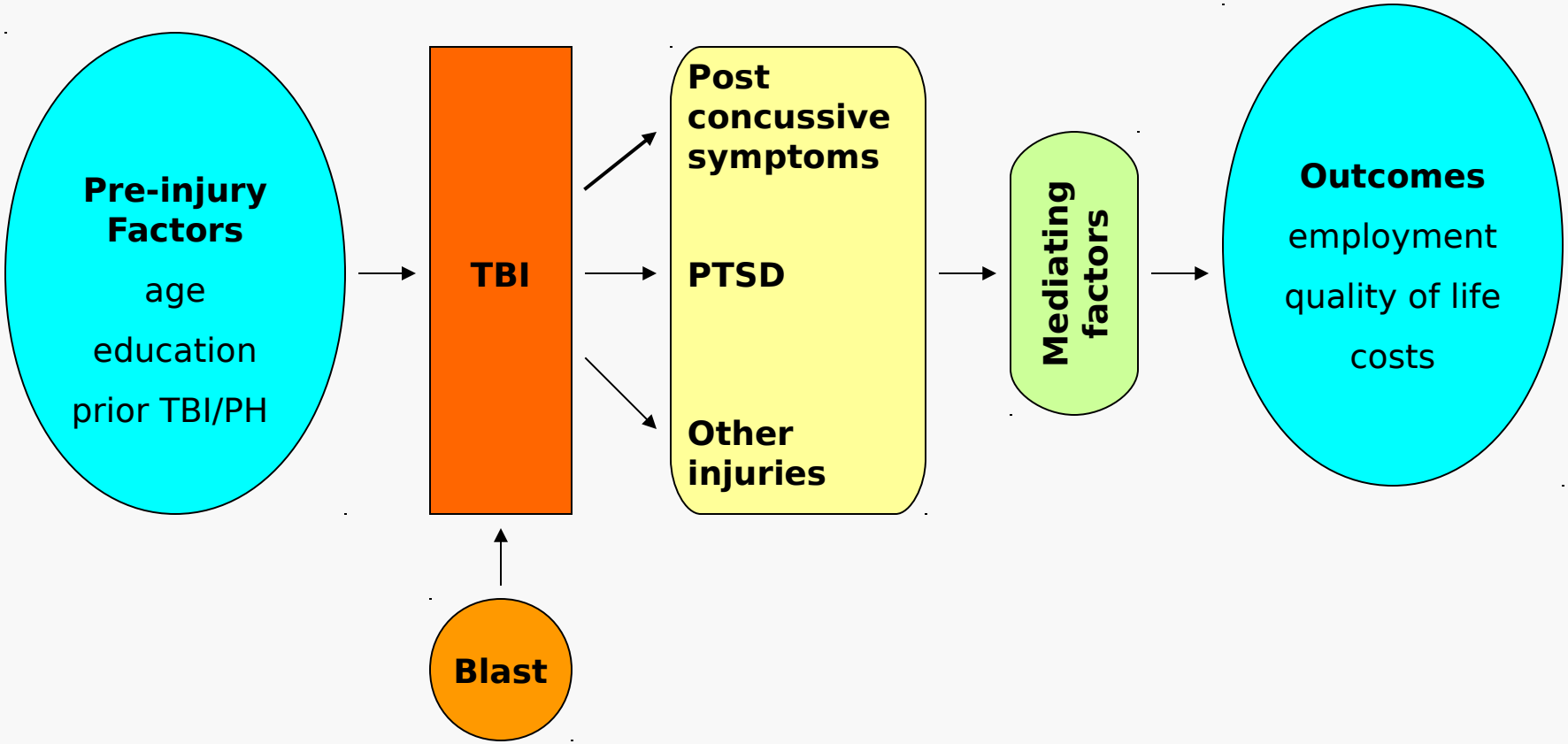
- Reports to Congress: 3, 7, 11, and 15 year marks summarizing findings to date, and summaries of all publications and presentations.
- Presentations and Publications:
- Baseline findings will be presented in an online/hardcopy report with basic descriptions and expert summaries for each area of the study.
- Analytic papers and reports will be presented and published for each follow-up period on the risk factors for TBI, factors affecting outcomes after TBI, and their association with pre-injury characteristics.
- Additional reports will summarize costs quality of life and family issues related to military TBI.

Study Design

- Follow-up study of 1200 military personnel who incurred TBI in Iraq or Afghanistan.
  Mild, moderate, and severe TBI will be included.
- Overtime assessments:
  - Yearly telephone interviews (CDC/DVBIC interview)
  - Subsample (n=400) followed with in-depth clinical evaluations
  - Military and DVA databases
- Matched comparison groups:
  - Civilian Sample – CDC Study
  - Service members without TBI

DVBIC/DCOE

15-year Study of War-related TBI Outcomes



Populations Included

- Patients diagnosed with TBI at Landstuhl and medically evacuated to DVBIC military and DVA facilities.
- Returnees with mild TBI screened at Fort Bragg and Fort Carson
- Returnees diagnosed with TBI at WRAMC

Study Costs

- Projected total costs over 15 years are $23.3 million for military studies and $4.1 million for civilian study. (unadjusted for inflation)
- DCoE has requested costs be included in POM for stability of funding over time.
- Costs borne by:
  - DVBIC for years 1 and 2
  - DCoE for years 3 to 15.

Important Dimensions Included

- Long term outcomes of TBI at all severity levels.
- Careful assessment of PTSD.
- Influence of associated injuries and conditions, including depression, amputations, and burns on recovery.
- Determine genetic susceptibility for poor recovery and community re-integration
- Association of clinical biomarkers and neuroimaging findings with recovery.
- Assessment of treatment and rehabilitation costs, and caregiver burden.
- Determine the long term impact of TBI on independence, productivity, and quality of life.

What We Will Know from the Study

- Long term physical and mental health effects
- Health care, mental health care, and rehabilitation needs
- Impact on family members
- Factors influencing recovery